

CLAIMS

What is claimed is:

1. A simulation game system, integrating geographical information provided by a geographical information system for forming a game background and creating game course interaction, the system comprising:

a manipulation displaying module, displaying a game background according to a move signal generated by a manipulating action, and operating a game course according to a trigger signal generated by another manipulating action;

10 a logic computing module, receiving a move signal and performing logic computing of character coordinate data and a corresponding display area respectively, and further receiving a trigger signal and performing logic computing of corresponding event coordinate data;

a geographical information system, providing map layer data according to the display area and performing geographical information analysis corresponding to the event coordinate data, wherein the geographical information system further comprises:

15 a geographical information database, storing the map layer data corresponding to the display area and the geographical information corresponding to the event coordinate data;

a game database, storing a plurality of game course sequences corresponding to the event coordinate data, and a plurality of background object data corresponding to the display area; and

20 a background generator module, receiving the map layer data to perform stacking logic computing and generate the game background, and further executing a game course sequence according event coordinate data.

2. The simulation game system of claim 1, wherein the map layer data comprises at least vector layer data and grid layer data.

3. The simulation game system of claim 1, wherein the geographical information analysis comprises at least a buffer zone analysis, a route analysis, a space topology analysis, a slope inclination analysis, a 3-dimensions view analysis, or a tendency forecast analysis.

4. The simulation game system of claim 1, wherein the display area is a maximal visible area from the character coordinate data.

5. A simulation game method, integrating geographical information provided by a Geographical Information System for forming a game background and creating game course interaction, the method comprising:

detecting a move signal and computing and creating game character coordinate data;

10 transmitting a display area corresponding to the game character coordinate data and accessing to map layer data;

according to coordinates of the display area and vector layer data, performing a first map overlay computing;

15 according to coordinates of the display area and grid layer data, performing a second map overlay computing;

reading background objects data in the display area and forming a game background; and displaying in real-time the game background.

6. The simulation game method of claim 5, wherein the map layer data comprises at least vector layer data and grid layer data.

20 7. The simulation game method of claim 5, wherein the display area is a maximal visible area from the character coordinate data.

8. A simulation game method, integrating geographical information provided by a Geographical Information System for forming a game background and creating game course

interaction, the method comprising:

- detecting a trigger signal and generating corresponding event coordinate data;
- transmitting the event coordinate data corresponding to the trigger signal;
- if the event coordinate data correspond to a geographical information event, returning
5 geographical information corresponding to the event coordinate data via the geographical information system; and performing a display update.

9. The simulation game method of claim 8, further comprising reading and executing a preset game course sequence corresponding to the event coordinate data when the event coordinate data correspond to a game course event.

10. The simulation game method of claim 8, returning geographical information corresponding to the event coordinate data via the geographical information system further comprises performing a geographical information analysis, wherein the geographical information analysis includes at least a buffer zone analysis, a route analysis, a space topology analysis, a slope inclination analysis, a 3-dimensions view analysis, or a tendency
15 forecast analysis.